

2-Flute Long Length Carbide End Mills

Long length end mills combine added flute and overall length for greater reach when deep slotting or milling. These end mills have the capability to mill much thicker material in a single pass, thereby eliminating the interrupted cut that may be present with regular length end mills.



Bright: Speeds & Feeds > P. A31
TiAIN: Speeds & Feeds > P. A34

| Cutting Dia. | Shank Dia. | Flute Length | Overall Length | Bright Code No. | Price \$ | TiAIN Code No. | Price \$ |
|---------------|------------|--------------|----------------|-----------------|----------|----------------|----------|
| Inch | | | | | | | |
| 1/8 | 1/8 | 3/4 | 2-1/4 | 102961 | 17.30 | 102902 | 18.17 |
| 3/16 | 3/16 | 3/4 | 2-1/4 | 102962 | 18.88 | 102904 | 19.88 |
| 1/4 | 1/4 | 1-1/8 | 3 | 102963 | 34.12 | 102906 | 41.36 |
| 5/16 | 5/16 | 1-1/8 | 3 | 102964 | 42.12 | 102908 | 52.95 |
| 3/8 | 3/8 | 1-1/8 | 3 | 102965 | 47.39 | 102910 | 58.24 |
| 7/16 | 7/16 | 2 | 4 | 102966 | 71.62 | 102912 | 87.54 |
| 1/2 | 1/2 | 2 | 4 | 102967 | 76.18 | 102914 | 92.10 |
| 5/8 | 5/8 | 2-1/4 | 5 | 102968 | 156.99 | 102916 | 183.42 |
| 3/4 | 3/4 | 2-1/4 | 5 | 102969 | 226.62 | 102918 | 238.55 |
| 1 | 1 | 2-1/4 | 5 | 102970 | 425.18 | 102920 | 355.42 |
| Metric | | | | | | | |
| 3 | 3 | 19 | 57 | 101560 | 16.55 | 102921 | 19.32 |
| 4 | 4 | 19 | 57 | 101561 | 17.40 | 102923 | 20.90 |
| 5 | 5 | 25 | 64 | 101562 | 31.02 | 102925 | 38.22 |
| 6 | 6 | 28 | 76 | 101563 | 35.95 | 102927 | 43.14 |
| 8 | 8 | 29 | 76 | 101564 | 44.36 | 102929 | 55.16 |
| 10 | 10 | 32 | 76 | 101565 | 51.44 | 102931 | 63.75 |
| 12 | 12 | 51 | 102 | 101566 | 80.77 | 102933 | 96.69 |
| 14 | 14 | 57 | 127 | 101567 | 144.58 | - | - |
| 16 | 16 | 57 | 127 | 101568 | 156.99 | 102937 | 183.42 |
| 18 | 18 | 57 | 127 | 101569 | 236.05 | 102939 | 236.05 |
| 20 | 20 | 57 | 127 | 101570 | 263.46 | - | - |
| 25 | 25 | 57 | 127 | 101571 | 405.97 | - | - |

2-Flute Extra Long Length Carbide End Mills

Extra long length end mills combine added flute and overall length for greater reach when deep slotting or milling. These end mills have the capability to mill much thicker material in a single pass, thereby eliminating the interrupted cut that may be present with regular length end mills.



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| Cutting Dia. | Shank Dia. | Flute Length | Overall Length | Bright Code No. | Price \$ | TiAIN Code No. | Price \$ |
|--------------|------------|--------------|----------------|-----------------|----------|----------------|----------|
| Inch | | | | | | | |
| 1/8 | 1/8 | 1 | 3 | 102400 | 26.72 | 102500 | 30.99 |
| 3/16 | 3/16 | 1-1/8 | 3 | 102402 | 29.47 | 102502 | 34.94 |
| 1/4 | 1/4 | 1-1/2 | 4 | 102404 | 36.04 | 102504 | 44.50 |
| 5/16 | 5/16 | 1-5/8 | 4 | 102406 | 47.03 | 102506 | 60.75 |
| 3/8 | 3/8 | 1-3/4 | 4 | 102408 | 52.03 | 102508 | 65.80 |
| 7/16 | 7/16 | 3 | 6 | 102410 | 95.20 | 102510 | 117.61 |
| 1/2 | 1/2 | 3 | 6 | 102412 | 132.53 | 102512 | 132.53 |
| 5/8 | 5/8 | 3 | 6 | 102414 | 156.99 | 102514 | 183.42 |
| 3/4 | 3/4 | 3 | 6 | 102416 | 250.09 | 102516 | 280.69 |
| 1 | 1 | 3 | 6 | 102418 | 425.18 | 102518 | 464.89 |

Tolerances - Inch

| Size | Diameter | Shank Diameter |
|--------------|----------------|------------------|
| 3/32 thru 1" | +0.000"-0.002" | +0.0000"-0.0005" |

Tolerances - Metric

| Size | Diameter | Shank Diameter |
|----------|------------------|------------------|
| 1mm-25mm | +0.000mm-0.051mm | +0.000mm-0.013mm |

Steel

Stainless Steel

Cast Iron/Hardened

Aluminum

2-Flute Double End Stub Length

Double end end mills offer the same tool geometry as the single end stub end mill, but with two cutters in one tool. Economy is an added feature of this tool.



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| Cutting Dia. | Shank Dia. | Flute Length | Overall Length | Bright Code No. | Price \$ | TiAIN Code No. | Price \$ |
|--------------|------------|--------------|----------------|-----------------|----------|----------------|----------|
| Inch | | | | | | | |
| 1/32 | 1/8 | 5/64 | 1-1/2 | 102260 | 21.40 | 102360 | 32.13 |
| 1/16 | 1/8 | 1/8 | 1-1/2 | 102262 | 21.40 | 102362 | 25.70 |
| 3/32 | 1/8 | 3/16 | 1-1/2 | 102264 | 21.40 | 102364 | 25.70 |
| 1/8 | 1/8 | 1/4 | 1-1/2 | 102266 | 13.27 | 102366 | 17.56 |
| 5/32 | 3/16 | 5/16 | 2 | 102268 | 23.56 | 102368 | 27.86 |
| 3/16 | 3/16 | 3/8 | 2 | 102270 | 19.22 | 102370 | 23.54 |
| 7/32 | 1/4 | 1/2 | 2-1/2 | 102272 | 27.47 | 102372 | 45.42 |
| 1/4 | 1/4 | 1/2 | 2-1/2 | 102274 | 25.03 | 102374 | 33.87 |
| 5/16 | 5/16 | 1/2 | 2-1/2 | 102276 | 38.92 | 102376 | 44.39 |
| 3/8 | 3/8 | 1/2 | 2-1/2 | 102278 | 33.10 | 102378 | 58.00 |
| 7/16 | 7/16 | 9/16 | 2-3/4 | 102280 | 70.35 | 102380 | 71.37 |
| 1/2 | 1/2 | 5/8 | 3 | 102282 | 56.28 | 102382 | 71.37 |

2-Flute Double End Regular Length

With maximum chip clearance, 2-flute end mills are ideal for milling, sinking, profiling or slotting in a variety of materials.



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| Cutting Dia. | Shank Dia. | Flute Length | Overall Length | Bright Code No. | Price \$ | TiAIN Code No. | Price \$ |
|--------------|------------|--------------|----------------|-----------------|----------|----------------|----------|
| Inch | | | | | | | |
| 1/8 | 3/8 | 3/8 | 3-1/16 | 101300 | 41.98 | 102001 | 55.26 |
| 5/32 | 3/8 | 7/16 | 3-1/8 | 101301 | 52.48 | 102003 | 69.07 |
| 3/16 | 3/8 | 1/2 | 3-1/4 | 101302 | 41.98 | 102005 | 69.07 |
| 7/32 | 3/8 | 9/16 | 3-3/8 | 101303 | 52.48 | 102007 | 69.07 |
| 1/4 | 3/8 | 5/8 | 3-3/8 | 101304 | 41.98 | 102009 | 66.41 |
| 9/32 | 3/8 | 11/16 | 3-3/8 | 101305 | 48.25 | 102011 | 81.36 |
| 5/16 | 3/8 | 3/4 | 3-1/2 | 101306 | 57.99 | 102013 | 81.36 |
| 11/32 | 3/8 | 3/4 | 3-1/2 | 101307 | 60.31 | - | - |
| 3/8 | 3/8 | 3/4 | 3-1/2 | 101308 | 48.25 | 102017 | 81.36 |
| 7/16 | 1/2 | 7/8 | 4 | 101309 | 73.19 | 102019 | 89.47 |
| 1/2 | 1/2 | 1 | 4 | 101310 | 77.86 | 102021 | 94.13 |

End Mill Dispenser Cabinets

- Three drawer
- All steel



| Description | Model No. | Code No. | Price \$ |
|--|-----------|----------|----------|
| Two flute single and double end for 1/16 to 1 | CZD10 | 113905 | 1,529.44 |
| Four flute single and double end for 1/16 to 1 | CZD11 | 113906 | 1,529.44 |
| Two and four flute single and double end for 1/8 to 1 x 8ths | CZD12 | 113907 | 372.97 |

End Mill Sheath Rack

- ABS plastic
- 62 sheaths



| Model | Size Range (mm) | Dimensions | Code No. | Price \$ |
|-------|-----------------|------------|----------|----------|
| VMS-2 | Ø6-Ø42 | 205x205x80 | 326545 | 53.99 |